

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION	DOCKET No.:	PF 53620
OF: HESSE ET AL.	CONFIRMATION No.:	7432
SERIAL No. 10/516,922	GROUP ART UNIT:	1621
FILED: DECEMBER 07, 2004	EXAMINER:	K. GALE
FOR: TWO-STAGE PROCESS FOR PREPARING BUTANEDIOL WITH INTER-MEDIATE REMOVAL OF SUCCINIC ANHYDRIDE		

Honorable Commissioner  
for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

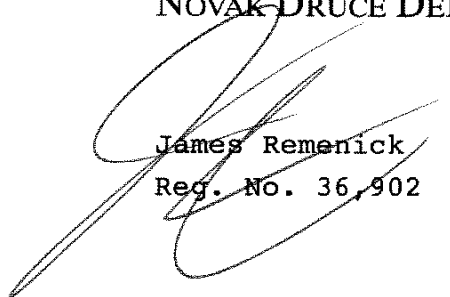
Sir:

This subject Information Disclosure Statement is submitted in connection with applicants' continuing duty of disclosure under 37 C.F.R. §1.56.

The fee set forth in 37 C.F.R. §1.17(p) in the amount of \$180.00 is herewith paid by credit card (Form PTO-2038 enclosed).

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 14.1437. Please credit any excess fees to such deposit account.

Respectfully submitted,  
NOVAK-DRUCE DELUCA & QUIGG

  
James Remenick  
Reg. No. 36,902

Customer No.: 26474  
1300 Eye Street, N.W.  
Suite 400 East Tower  
Washington, D.C. 20005  
(202) 659-0100

Encl.: Form PTO - 1449  
Form PTO - 2038

JR/BAS

061129

LISTING OF RELEVANT DOCUMENTS:

The relevant documents are listed in the attached Form PTO-1449.

REMARKS:

The listed documents C, O, AD and AAA were cited in the International Search Report. The remaining references are addressed on pages 2 to 9 of the application. For example, a concise discussion

- of document AO is found in the paragraph beginning on page 6 in line 23 of the application,
- of documents AS to AY is found in the paragraphs beginning on page 7 in lines 7, 11 and 14 of the application,
- of document AZ is found in the paragraph beginning on page 4 in line 15 of the application, and
- of documents AAB, AAE and AAG is found in the paragraph beginning on page 4 in line 22, on page 4 in line 26, and on page 7 in line 31, of the application, respectively.

Additionally, applicants have included either an English language counterpart, and English language translation, or an English language abstract of all non-English language references.

Form PTO-1449

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**

(use several sheets if necessary)

DOCKET NUMBER:

**PF 53620**

APPLICATION NUMBER:

**10/516,922**

APPLICANT:

**HESSE et al.**

CONFIRMATION NUMBER:

**7432**

FILING DATE:

**December 07, 2004**

GROUP ART UNIT:

**1621****U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A	US 3,268,588	08/1966	HORLENKO et al.	260	585
	B	US 4,001,282	01/1977	MILLER	260	343.6
	C	US 4,048,196	09/1977	BROECKER et al.	260	346.11
	D	US 4,268,695	05/1981	LANGE et al.	568	864
	E	US 4,301,077	11/1981	PESA et al.	260	346.11
	F	US 4,652,685	03/1987	CAWSE et al.	568	864
	G	US 4,797,382	01/1989	De THOMAS et al.	502	245
	H	US 4,885,411	12/1989	De THOMAS et al.	568	864
	I	US 4,940,805	07/1990	FISCHER et al.	549	326
	J	US 4,965,378	10/1990	BUDGE et al.	549	508
	K	US 5,030,773	07/1991	JOHNSON et al.	568	864
	L	US 5,072,009	12/1991	BUDGE et al.	549	508
	M	US 5,122,495	06/1992	TAYLOR et al.	502	183
	N	US 5,149,836	09/1992	De THOMAS et al.	549	325
	O	US 5,196,602	03/1993	BUDGE et al.	568	864
	P	US 5,395,990	03/1995	SCARLETT	568	864
	Q	US 5,406,004	04/1995	EASTLAND et al.	568	831
	R	US 5,536,849	07/1996	BERGFELD et al.	549	325
	S	US 6,008,375	12/1999	BERGFELD et al.	548	554
	T	US 6,297,389	10/2001	CASTIGLIONI et al.	549	295

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	NAME	TRANSLATION	
					YES	NO
	AA	WO 91/16132	10/1991	WIPO	TAYLOR et al.	n / a
	AB	WO 95/22539	08/1995	WIPO	LANCIA et al.	n / a
	AC	WO 97/24346	07/1997	WIPO	BERGFELD et al.	S
	AD	WO 97/43234	11/1997	WIPO	TUCK et al.	n / a
	AE	WO 99/35113	07/1999	WIPO	BERTOLA	n / a
	AF	WO 99/35114	07/1999	WIPO	BERTOLA	n / a
	AG	WO 99/35136	07/1999	WIPO	BERTOLA	n / a
	AH	WO 99/35139	07/1999	WIPO	CASTIGLIONI et al.	n / a

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

**NOVAK DRUCE DeLUCA & QUIGG**

1300 Eye Street, N.W.

Suite 400 East

Washington, DC 20005

Form PTO-1449

# **INFORMATION DISCLOSURE CITATION IN AN APPLICATION**

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## **FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	NAME	TRANSLATION	
					YES	NO
	AI	WO 99/38856	08/1999	WIPO	CASTIGLIONI et al.	n / a
	AJ	WO 99/52845	10/1999	WIPO	BERTOLA et al.	n / a
	AK	EP 0 318 129	05/1989	Europe	De THOMAS et al.	n / a
	AL	EP 0 322 140	06/1989	Europe	ATTIG et al.	n / a
	AM	EP 0 373 946	06/1990	Europe	SUZUKI et al.	n / a
	AN	EP 0 373 947	06/1990	Europe	SUZUKI et al.	n / a
	AO	EP 0 382 050	08/1990	Europe	WEYER et al.	BA
	AP	EP 0 404 408	12/1990	Europe	BUDGE	n / a
	AQ	EP 0 431 923	06/1991	Europe	SUZUKI et al.	n / a
	AR	EP 0 638 565	02/1995	Europe	BERGFELD et al.	R
	AS	CN 1 047 328	11/1990	China		BB
	AT	CN 1 113 831	12/1995	China		BC
	AU	CN 1 116 615	02/1996	China		BD
	AV	CN 1 137 944	12/1996	China		BE
	AW	CN 1 138 018	12/1996	China		BF
	AX	CN 1 182 639	05/1998	China		BG
	AY	CN 1 182 732	05/1998	China		BH
	AZ	DE 1 277 233	09/1968	Germany	HOOD et al.	A
	AAA	DE 2 043 349	03/1972	Germany	MURATA et al.	BI
	AAB	DE 2 231 986	01/1974	Germany	KANETAKA et al.	AAJ
	AAC	DE 2 404 493	08/1974	Germany	MILLER	B
	AAD	DE 24 55 617	05/1976	Germany	BROECKER et al.	C
	AAE	DE 25 01 499	07/1976	Germany	FREUDENBERGER et al.	AAK
	AAF	DE 28 45 905	04/1980	Germany	LANGE et al.	D
	AAG	DE 37 26 510	02/1989	Germany	EGGERSDORFER et al.	BJ
	AAH	GB 1,168,220	10/1969	Great Britain		n / a
	AAI	GB 1,230,276	04/1971	Great Britain		n / a
	AAJ	GB 1,344,557	01/1974	Great Britain		n / a
	AAK	GB 1,512,751	06/1978	Great Britain		n / a
	AAL	JP 49/087,610	08/1974	Japan		BK

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**1621****FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	NAME	TRANSLATION	
					YES	NO
	<b>AAM</b>	<b>JP 01/121,228</b>	05/1989	Japan		<b>BL</b>
	<b>AAN</b>	<b>JP 02/025,434</b>	01/1990	Japan		<b>BM</b>
	<b>AAO</b>	<b>JP 02/233,630</b>	09/1990	Japan		<b>BN</b>
	<b>AAP</b>	<b>JP 02/233,631</b>	09/1990	Japan		<b>BO</b>
	<b>AAQ</b>	<b>JP 02/233,632</b>	09/1990	Japan		<b>BP</b>
	<b>AAR</b>	<b>JP 05/036,669</b>	02/1993	Japan		<b>BQ</b>
	<b>AAS</b>	<b>JP 06/034,567</b>	02/1994	Japan		<b>X</b>
	<b>AAT</b>	<b>JP 07/240,770</b>	09/1995	Japan		<b>X</b>
	<b>AAU</b>	<b>JP 09/024,906</b>	01/1997	Japan		<b>X</b>

**OTHER DOCUMENTS**

EXAMINER INITIAL	AUTHOR / Number	DOCUMENT
	<b>BA</b>	<b>EP 0 382 050</b>
	<b>BB</b>	<b>CN 1 047 328</b>
	<b>BC</b>	<b>CN 1 113 831</b>
	<b>BD</b>	<b>CN 1 116 615</b>
	<b>BE</b>	<b>CN 1 137 944</b>
	<b>BF</b>	<b>CN 1 138 018</b>
	<b>BG</b>	<b>CN 1 182 639</b>
	<b>BH</b>	<b>CN 1 182 732</b>
	<b>BI</b>	<b>DE 2 043 349</b>
	<b>BJ</b>	<b>DE 3 726 510</b>
	<b>BK</b>	<b>JP 49/087,610</b>
	<b>BL</b>	<b>JP 01/121,228</b>
	<b>BM</b>	<b>JP 02/025,434</b>
	<b>BN</b>	<b>JP 02/233,630</b>
	<b>BO</b>	<b>JP 02/233,631</b>
	<b>BP</b>	<b>JP 02/233,632</b>
	<b>BQ</b>	<b>JP 05/036,669</b>
	<b>BR</b>	<b>DASHUNIN et al.</b>
		Z. Org. Chim. 1(6), 996-1000 (1996) – English language translation "Substituted Lactones and their Transformations – Preparation of 1- and 2-alkyl-1,4-buta-dienes from $\alpha$ - and $\gamma$ -substituted Butyrolactones"

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